We report on work in progress with Masahiro Nakahara and Vlad Mitankin on two notions of semi-integral points coming from the theory of Campana orbifolds (pairs of a variety and a weighted divisor). We focus on local-global principles for two families of orbifolds naturally associated to quadric hypersurfaces, depending on whether they act as the ambient variety or as the orbifold divisor.

One notion, Campana points, has been the focus of several recent papers seeking to describe the analytic and geometric abundance of such points. On an arithmetic level, Campana points correspond to powerful solutions of equations. We show that a Campana points analogue of weak approximation holds for both of our families.

The other notion, which we christen Darmon points due to their appearance in Darmon's theory of M-curves, corresponds to solutions in powers, and is less studied in a geometric context. We formulate a semi-integral version of the Brauer--Manin obstruction and give results on the Hasse principle for Darmon points for quadric hypersurfaces with a weighted hyperplane section as orbifold divisor.